

DEC 26 2006

Application No.: 10/721,615

Docket No.: NGW-014RCE

**REMARKS**

Applicants amend claims 1-3. No new matter is added. Support for the amendment can be found throughout the specification and at least at Fig. 3 and its related text. Upon entry of this amendment, claims 1-3 are pending, of which claim 1 is independent. Applicants respectfully submit that the pending claims define over the art of record.

**Claim Rejection Under 35 U.S.C. §112**

The Examiner rejects claim 1 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Applicants amend claim 1 to clarify when hydrogen discharge can or cannot occur. Applicants respectfully submit that the subject matter of amended claim 1 is sufficiently described in the specification to enable one ordinary skill in the art to make and/or use the invention. Specifically, the specification provides details regarding when hydrogen from the fuel cell can be discharged at Pages 10-11, 14-17, and the flow chart in Fig. 3.

Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 1 under 35 U.S.C. §112.

**The Claimed Invention**

The claimed invention is provided with a fuel cell system that can suppress the increase in concentration and quantity of hydrogen discharged from the fuel cell system. The hydrogen concentration detection unit is used to measure the concentration of hydrogen in the gas discharged from the hydrogen concentration reduction process unit.

The hydrogen discharge unit is *prohibited* from discharging hydrogen when an instantaneous hydrogen concentration of a gas detected by the hydrogen concentration detection unit exceeds a first threshold, or the average concentration of hydrogen calculated by the average hydrogen concentration calculating unit exceeds a second threshold. See Fig. 3.

The hydrogen discharge unit is *permitted* from discharging hydrogen when an instantaneous hydrogen concentration of a gas detected by the hydrogen concentration detection

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unit does not exceed the first threshold and the average concentration of hydrogen does not exceed a second threshold so that the quantity and concentration of hydrogen in the discharged gas can be controlled before it is discharged into the atmosphere. See Fig. 3.

Claim Rejection Under 35 U.S.C. §102

The Examiner maintains the rejection of claims 1-3 under 35 U.S.C. §102(e) as being anticipated by United States Patent Publication No. 2002/0094469 to Yoshizumi et al. (hereafter "Yoshizumi").

The Yoshizumi reference discloses a method of discharging gas by mixing hydrogen-off gas and oxygen-off gas and then supplying the mixed gas to a combustor 510. The combustor 510 causes the hydrogen and oxygen contained in the mixed gas to react with each other through combustion and hence further reduces the concentration of hydrogen contained in the mixed gas. The mixed gas whose concentration of hydrogen has been reduced by the combustor 510 is discharged to the atmosphere afterwards. See Fig. 1 and paragraphs 59 and 60. However, the Yoshizumi reference does not disclose an average hydrogen concentration calculating unit for calculating an average hydrogen concentration per hour of a gas processed by the hydrogen concentration reduction process unit, as recited in claim 1. Additionally, the Yoshizumi reference also does not disclose the limitation that the discharge of a hydrogen from the fuel cell by the hydrogen discharge unit is prohibited in the event that the average hydrogen concentration calculated by the average hydrogen concentration calculating unit exceeds a second threshold which is lower than the first threshold, as recited in amended claim 1.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of independent claim 1. Applicants note that the dependent claims also recite patentable subject matter. As such, for this and the reasons set forth above, Applicants respectfully submit that the dependent claims also define over the art of record.